

REMARKS

The Office Action dated May 17, 1999, and the patents and publications cited therein have been carefully reviewed, and in view of the above changes and following remarks reconsideration and allowance of all the claims pending in the application are respectfully requested.

The Abstract Of The Disclosure

The Abstract of the Disclosure stands objected-to because the format of the Abstract of the Disclosure is not limited to a single paragraph.

Applicants have submitted a substitute Abstract of the Disclosure concurrently with this Amendment that is limited to a single paragraph.

Thus, Applicants respectfully request the Examiner to withdraw this objection.

The Objection To The Claims

Claims 31-34 stand objected-to under 37 C.F.R. § 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim.

Applicants have amended each of claims 31-34 so that each claim is not a multiple dependent claim that depends from another multiple dependent claim. Accordingly, Applicants have added new claims 35-38, which are discussed below.

Thus, Applicants respectfully request the Examiner to withdraw this objection.

The Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 5-8 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention.

Applicants respectfully submit that the language appearing in claim 5 is self-consistent and does not require amendment for clarification. That is, the recitation "the same selected frame" in lines 1-2 of claim 5 on page 23 does not require antecedent basis because the terminology is merely indicating that the selected frame, which has antecedent basis, is the same. To replace the original language with "a same" would be ungrammatical. Regarding the word "are" at line 2 of claim 5 on page 23, Applicants respectfully submit that the word "are" relates to the plural number of request signals. Consequently, use of the word "are" is appropriate. Regarding the phrase "said plural number of times" in line 4 of claim 5 on page 23, Applicants respectfully submit that the plural number of times refers to the plural number of error correction request signals detailed at page 22, line 24, through page 23, line 1. The foregoing comments similarly apply to the issues raised with respect to claim 7.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection.

The Rejection Under 35 U.S.C. § 102(b) Over Spragins

Claims 19, 20, 22, 23 and 27-30 stand rejected under 35 U.S.C. § 102(b) as anticipated by Spragins et al. (Spragins), Telecommunications Protocols and Design, Addison-Wesley Publishing Company, July 1992.

Applicants respectfully submit that the present invention according to claims 19, 20, 22, 23 and 27-30 is not anticipated by Spragins.

Regarding claim 19, Applicants respectfully submit that Spragins does not disclose an apparatus for receiving data from a broadcast station having means for transmitting to the broadcast station at predetermined intervals an error status signal. Spragins discloses error correction request signal is used that indicates negative acknowledgment or selected ones of frames that were not received correctly. According to Spragins, the nature of the error that the error correction request signal is used for is a random event. That is, Spragins uses the error correction request signal in response to an error condition. Based on the random nature of an error event, it follows that Spragins does not transmit the error correction request signal at predetermined intervals.

Thus, claim 19 is allowable over Spragins. Additionally, Applicants respectfully submit that claim 20, which incorporates the limitations of claim 19, is allowable over Spragins for at least the same reason that claim 19 is considered allowable.

Regarding claim 22, Applicants respectfully submit that Spragins does not disclose a method having the step of transmitting to the broadcast station at predetermined intervals an error status signal. As shown in connection with claim 19, Spragins discloses an error correction request signal that is transmitted a random time intervals in response to the occurrence of an error condition.

Thus, claim 22 is allowable over Spragins. Claim 23, which incorporates the limitations of claim 22, is allowable over Spragins for at least the same reasons that claim 22 is considered allowable.

Applicants have amended each of claims 27 and 29 to recite that the claimed format of the signals that are transmitted to the broadcast station includes "receive state information indicating the sequence number of the last in sequence of the received frames, but not including a transmit state field." Consequently, amended claim 27 is patentable over Spragins because Spragins does not disclose or suggest an apparatus having the claimed means for transmitting to the claimed broadcast station in a format including receive state information indicating the sequence number of the last in sequence of the received frames, but not including a transmit state field. Claim 28, which incorporates the limitations of amended claim 27, is patentable over Spragins for at least the same reason that amended claim 27 is considered patentable.

Similarly, amended claim 29 is patentable over Spragins because Spragins does not disclose or suggest a method having the step of transmitting to the claimed broadcast station in a format including receive state information indicating the sequence number of the last in sequence of the received frames, but not including a transmit state field. Claim 30, which incorporates the limitations of amended claim 29, is patentable over Spragins for at least the same reason that amended claim 29 is considered patentable.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 19, 20, 22, 23 and 27-30.

The Rejection Under 35 U.S.C. § 103(a) Over Wiedeman In View of Smolinske

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wiedeman, U.S. Patent No. 5,303,286, in view of Smolinske et al. (Smolinske), U.S. Patent No. 5,487,068.

Applicants have amended claim 1 so that claim 1 is directed to an apparatus for broadcasting data. Claim 3 has been similarly amended to now be directed to a method of broadcasting data.

Applicants respectfully submit that the present invention according to any of claims 1-4 is patentable over Wiedeman in view of Smolinske. Applicants respectfully submit that even if Wiedeman and Smolinske are combined, the device resulting from the combination is not the present invention.

Specifically, Applicants submit that there is no disclosure in Wiedeman or Smolinske of broadcasting as understood by this term in the art. Applicants submit that the term "broadcast" is used for denoting a general and non-addressed transmission of data. That is, the data is not addressed to any specific receiving station. The present invention of claim 1 requires that the apparatus include means for broadcasting data in a common channel receivable by each of the claimed local stations. Wiedeman, however, does not disclose or suggest use of broadcast in the sense of the present invention. The databases disclosed by Wiedeman are updated by a packet switched terrestrial network. (See Wiedeman, column 15). Smolinske relates to data transmission in a packet-switched communication system where data is divided into packets and transmitted via a specific route to a predetermined destination. In other words, the data transmitted by the Smolinske system is addressed to a receiving station.

Thus, amended claim 1 is patentable over Wiedeman in view of Smolinske. Further, claim 2, which incorporates the limitations of amended claim 1, is patentable over Wiedeman in view of Smolinske for at least the same reason that amended claim 1 is considered patentable.

Regarding amended claim 3, Applicants respectfully submit that amended claim 3 is patentable over Wiedeman in view of Smolinske for a reason similar to the reason that amended claim 1 is considered patentable. That is, neither Wiedeman nor Smolinske disclose or suggest a method of broadcasting data. Additionally, claim 4, which incorporates the limitations of amended claim 3, is patentable over Wiedeman in view of Smolinske for at least the same reason that amended claim 3 is considered patentable.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 1-4.

The Rejection Under 35 U.S.C. § 103(a) Over Smolinske In View of Spragins

Claims 9 and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Smolinske in view of Spragins.

Applicants have amended claim 9 to be directed to an apparatus for broadcasting that includes means for transmitting that is operable to broadcast a new frame which has not been previously broadcast only if the sequential order of said new frame is greater by less than a predetermined number than the earliest of said frames which has been transmitted to but not been received by any one of said receiving stations. Claim 10 has been amended in a similar manner.

Thus, Applicants respectfully submit that the present invention according to either of claims 9 and 10, as amended, is patentable over Smolinke in view of Spragins. Regarding amended claim 9, neither Smolinke nor Spragins disclose or suggest an apparatus for broadcasting data that includes means for transmitting that is operable to broadcast a new frame which has not been previously broadcast only if the sequential order of said new frame is greater by less than a predetermined number than the earliest of the frames which has been transmitted to but not been received by any one of the receiving stations. Regarding amended claim 10, neither Smolinske nor Spragins disclose or suggest a method for broadcasting data having the step of retransmitting the claimed selected frames to the receiving stations such that a new frame which has not previously been broadcast is broadcast only if the sequential order of the new frame is greater by less than a predetermined number than the earliest of the frames which has been transmitted to but not been received by any one of the local stations.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 9 and 10.

The Rejection Under 35 U.S.C. § 103(a) Over Smolinske In View of Ellis

Claims 11-16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Smolinske in view of Ellis et al. (Ellis), U.S. Patent No. 5,497,371.

Applicants have amended claim 11 so that claim 11 is now directed to an apparatus for broadcasting data. Claim 14 has been amended in a similar manner so that claim 14 now is directed to a method of broadcasting.

Applicants respectfully submit that the present invention of claims 11-16, as amended, is patentable over Smolinske in view of Ellis. Specifically, the device resulting from the combination of Smolinske and Ellis is not the present invention according to any of claims 11-16, as amended.

Regarding amended claim 11, neither Smolinske nor Ellis disclose an apparatus for broadcasting data. As submitted above, the term "broadcast" is used in the art to denote a general and non-specific outputting of the information, i.e., the information is not routed to a specific destination. Moreover, neither Smolinske nor Ellis disclose the claimed means for transmitting the claimed data in a common channel receivable by each of the claimed receiving stations in a format comprising a plurality of frames. There is no disclosure in Smolinske or in Ellis of a system in which data is broadcast in a common channel.

Thus, amended claim 11 is patentable over Smolinske in view of Ellis. Applicants respectfully submit that claims 12 and 13, which each incorporate the limitations of amended claim 11, are each patentable over Smolinske in view of Ellis for at least the same reasons that amended claim 11 is considered patentable.

Amended claim 14 is patentable over Smolinske in view of Ellis for reasons that are similar to the reasons that amended claim 11 is considered patentable. Specifically, neither Smolinske nor Ellis disclose or suggest a method of broadcasting data. Additionally, neither Smolinske nor Ellis disclose or suggest a method having the step of transmitting the claimed data in a common channel receivable by each of the claimed receiving stations in a format comprising a plurality of frames.

Thus, amended claim 14 is patentable over Smolinske in view of Ellis. Additionally, claims 15 and 16, which each incorporate the limitations of amended claim 14, are each patentable over Smolinske in view of Ellis for at least the same reasons that amended claim 14 is considered patentable.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 11-16.

The Rejection Under 35 U.S.C. § 103(a) Over Spragins.

Claims 21/19, 21/20, 24/22 and 24/23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Spragins.

Applicants respectfully submit that the present invention according to any of claims 21/19, 21/20, 24/22 and 24/23 is patentable of Spragins. As demonstrated above, claims 19 and 22, the base claims of 21/19, 21/20, 24/22 and 24/23, are each patentable over Spragins. Specifically regarding claim 19, Spragins does not disclose an apparatus for receiving data from a broadcast station having means for transmitting to the broadcast station at predetermined intervals an error status signal. Instead, Spragins discloses error correction request signal is used that indicates negative acknowledgment or selected ones of frames that were not received correctly. According to Spragins, the nature of the error that the error correction request signal is used for is a random event. Similar reasoning applies to claim 22.

Consequently, claims 21/19, 21/20, 24/22 and 24/23 are each patentable over Spragins, and Applicants respectfully request that the Examiner withdraw this rejection.

Newly Added Claims

Applicants respectfully request that the Examiner enter claims 35-38. Support for these claims can be found in originally-filed claims 31-34.

Applicants respectfully submit that each of new claims 35-38 are patentable over the applied art. Specifically, new claims 35 and 37 are patentable for at least the same reasons base claim 19 is considered patentable. Similarly, new claims 36 and 38 are patentable for at least the same reasons that base claim 22 is considered patentable.

Applicants respectfully request the Examiner to allow claims 35-38.

CONCLUSION


In view of the above amendments and arguments, it is urged that the present application is now in condition for allowance. Should the Examiner find that a telephonic or personal interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below.

A petition for the necessary extension of time to file this response having an attached check in payment of the applicable extension fee has been filed concurrently with this Amendment.

It is requested that this application be passed to issue with claims 1-16, 19-24 and 27-38.

Respectfully submitted,

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